

Attorney Docket No. 249/386



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of

Chan-soo HWANG, et al.

Art Unit:

2682

Serial No.

10/650,857

Examiner:

Doris Ha TO

Filed:

August 29, 2003

Confirmation No.

7396

For:

APPARATUS AND METHOD FOR

TRANSMITTING AND RECEIVING SIGNALS

USING MULTI-ANTENNAS

## INFORMATION DISCLOSURE STATEMENT UNDER 37 C.F.R. §1.56

Mail Stop: AMENDMENT Commissioner for Patents Alexandria, VA 22313-1450

Sir:

Submitted herewith on Form PTO/SB/08 (or PTO-1449, *modified*) is a listing of a document(s) known to applicant in order to comply with applicant's duty of disclosure pursuant to 37 C.F.R. §1.56.

☐ A copy of each listed document is being submitted to comply with the provisions of 37 C.F.R. §§1.97 & 1.98. [Box checked if applicable.]

A copy of each listed non-U.S. patent and/or patent publication and cited literature is being submitted to comply with the provisions of 37 C.F.R. §§1.97 & 1.98. Cited U.S. patents and patent publications are *not* attached in accordance with the waiver set forth in the Notice by the Deputy Commissioner for Patent Examination Policy dated July 11, 2003, applicable to applications having a U.S. filing date *after* June 30, 2003. [Box checked if applicable.]

\* \* \*

The submission of any document herewith, which is not a statutory bar, is not intended as an admission that such document constitutes prior art against the claims of the present application. Applicant does not waive any rights to take any action that would be appropriate to antedate or otherwise remove as a competent reference any document which is determined to be a *prima facie* prior art reference against the claims of the present application.

Attorney Docket No. 249/386
Page 2 of 3

Serial No. 10/650,857 Information Disclosure Statement under 37 C.F.R. §1.56

Where available, copies of English language patent family members of non-English patent documents have been provided. Such submission of English language patent family members is for the convenience of the Office and is not to be construed as an indication that such English language patent family members are literal translations of the non-English patents. Applicant(s) expressly reserve their right to file verified English translations of the non-English patent documents.

The listed document(s) is/are being submitted in compliance with 37 C.F.R. 1.97(b)(3): submission before the mailing date of the first action on the merits. [Box checked if applicable.]

The foregoing document(s) came to applicant's attention during the prosecution of their corresponding European application. A copy of the EP Search Report is also attached.

[Box(es) checked if applicable.]

## **CERTIFICATION**

The undersigned hereby certifies in accordance with 37 CFR §1.97(e)(1) that each item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than three (3) months prior to the filing of this Statement. [Box checked if applicable.]

\* \* \*

Applicant respectfully requests that the listed document(s) be considered by the Examiner and be made of record in the present application and that an initialed copy of Form PTO/SB/08 be returned in accordance with MPEP §609.

\* \* \*

## **FEE PAYMENT**

□ The fee mandated by 37 C.F.R. §1.17(p) is believed applicable. [Box checked if applicable.]
 □ Attached is Form PTO-2038 in payment of this fee (\$180.00). [Box checked if applicable.]
 □ This fee may be charged to Deposit Account No. 50-1645. (A duplicate copy of this paper is enclosed.) [Box checked if applicable.]

Respectfully submitted,

December 16, 2005

Date

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## DEPOSIT ACCOUNT CHARGE AUTHORIZATION

If fee payment is enclosed, this amount is believed to be correct. However, the Director is hereby authorized to charge any deficiency or credit any overpayment to Deposit Account No. 50-1645.

Any additional fee(s) necessary to effect the proper and timely filing of the above-paper may also be charged to Deposit Account No. 50-1645.

DEC 16 2005 W

PTO/SB/08B (04-03) Approved for use through 04/30/2003. OMB 0651-0031

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Cabsilia	10 10 10 11 1 1 1 0 1 1 0			Application Number	10/650,857		
INFORMATION DISCLOSURE STATEMENT BY APPLICANT  (Use as many sheets as necessary)				Filing Date	August 29, 2003 Chan-soo HWANG, etal 2682		
				First Named Inventor			
				Art Unit			
				Examiner Name	Doris Ha TO		
Sheet	1	of	1	Attorney Docket Number	249/386		

		NON PATENT LITERATURE DOCUMENTS	
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	1	KHALIGHI, et al., "Water Filling Capacity of Rayleigh MIMO Channels", 12th IEEE	
		Intnl. Symposium on Personal, Indoor and Mobile Radio Communications, PIMRC 2001,	
		Proceedings, Vol. 1, pp. A155-A158, (30 September 2001)	
	2	SAMPATH, et al, "Joint Transmit and Receive Optimization for High Data Rate Wireless	
		Communication Using Multiple Antennas", Signals, Systems, and Computers, 1999,	
		Conference Record of the 33rd ASILOMAR CONFERENCE, IEEE, Piscataway, NJ,	
		USA, IEEE, Vol. 1, pp. 215-219, (24 October 1999)	
	3	ZHOU, Shengli, et al., "Optical Transmitter Eigen-Beamforming and Space Time Block	
		Coding Based on Channel Mean", IEEE Intnl. Conference on Acoustics, Speech, & Signal Processing	
		(ICASSP), Orlando, FL, USA, IEEE, Vol. 4, pp. III.2852-III.2856 (13 May 2002)	

Examiner	Date	
Signature	Considered	

<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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